

## A New Species of *Medioxyoppia* SUBIAS (Acari: Oribatei) from Japan

Norihide OHKUBO<sup>1)</sup>

大久保憲秀<sup>1)</sup> : 日本産コブツブダニ属の1新種

**Abstract:** A new species of the genus *Medioxyoppia* (family Oppiidae) is described from Nagoya under the name *M. nagoyae*. One of the four known species of the genus, *M. mastigophora* (GOLOSOVA, 1970), is removed from the genus. Thus, the distribution of the members of the genus is now restricted to Japan.

### Introduction

SUBIAS and BALOGH (1989) established the genus *Medioxyoppia* SUBIAS, of which the type species is *Oppia yuwana* AOKI, 1983. At that time they included three other species into the genus, but one of them, *Oppia mastigophora* GOLOSOVA, 1970, is apparently not a congener because of having 12 notogastral setae. Therefore, there remain three species which were all described from Japan. Recently, the other species of the genus was found in Central Japan and is described below.

### *Medioxyoppia nagoyae* sp. nov.

(Figs. 1-14)

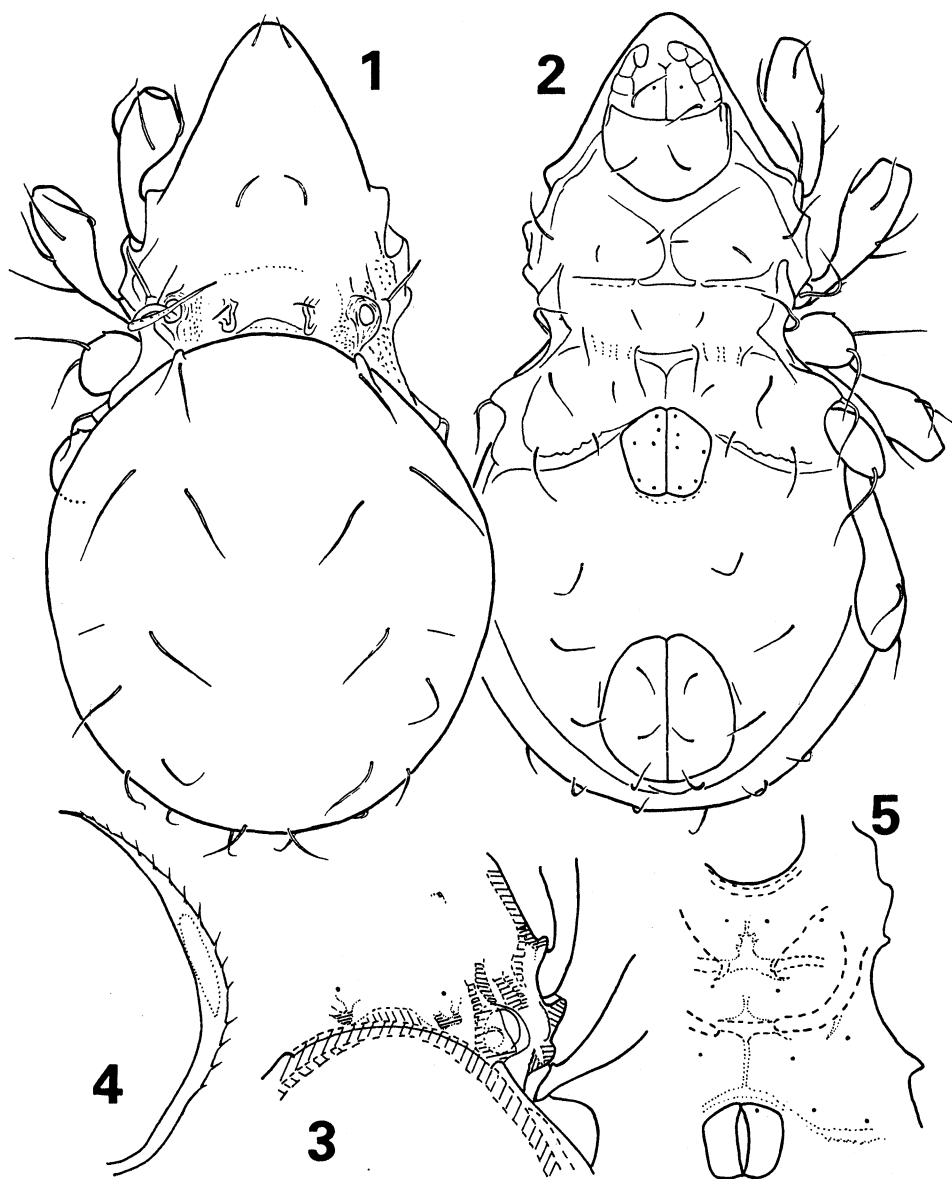
**Measurement** Body length of 13 specimens 271(295)317  $\mu\text{m}$ ; width of the same specimens 145(163)175  $\mu\text{m}$ .

**Prodorsum** Rostrum rounded at tip. Dorsal surface smoothly curved in lateral view. Rostral setae glabrous, about 2.0 times as long as their mutual distance. Lamellar setae glabrous, directed forward, about 0.6 times as long as rostral setae and about 0.6 times as long as their mutual distance. Neither lamellae nor translamella present. Interlamellar setae glabrous, directed upward, almost as long as rostral setae and about 0.7 times as long as their mutual distance. A pair of costulae just inside the interlamellar setae sigmoid and rather longitudinally situated. Under transparent illumination, only the posterior half of the costula is clearly observed (Fig. 3). The surface between the costulae swollen triangularly along dorsosejugal. Bothridium somewhat

---

1) Mie Nogyo-gijutsu Center, Ureshino-cho, Ichishi-gun, Mie, 515-22 Japan  
三重県農業技術センター

hemispherical. The aperture opening anterodorsally, surrounded by a doughnut-shaped ring, on which linear wrinkles are engraved. Fine granules widely scattered on dorsal surface just inside the ring. Sensillus essentially fusiform but extremely elongated with sharply pointed tip; the head bearing short spines unilaterally; the stem thick. Sensillar tips directed anteromedially and opposing to each other. Exobothridial setae strong, directed dorso-anterolaterally, slightly



**Figs. 1-5** *Medioxyoppia nagoyae* sp. nov. — 1. Dorsal aspect; 2. Ventral aspect; 3. Around posterior part of prodorsum, showing sclerotization; 4. Sensillus; 5. Epimeral region, showing apodemes.

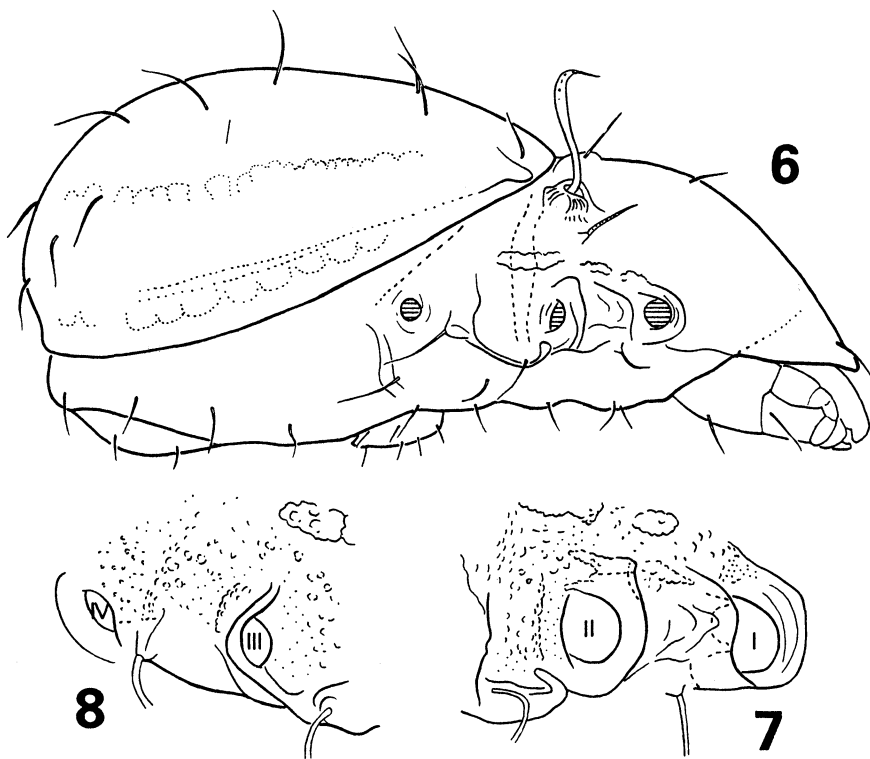
longer than rostral setae.

*Podosoma* Setal formula of epimerata 3-1-3-3. Setae *1a*, *1b*, *2a*, *3a* and *4a* short. Setae *1c*, *3b* and *4b* fairly long. Setae *3c* and *4c* the longest, having some spines.

External structures of epimeral plate (Fig. 2) are as follows. Each epimeron convex. Region between camerostome and epimera I widely flat. Both epimera I separated medially by a groove narrowed in the middle part. A pair of small ridges at border between epimera I and II; the border grooved between the ridges. No sternal border on epimera II. Border between epimera II and III deeply grooved medially. No border between epimera III and IV. Posterior borders of epimera IV minutely toothed; a groove runs along behind the border.

Internal structures of epimeral plates (Fig. 5) are as follows. Sternal ridge strong at epimera I, weak and short at epimera II, and clear but narrow at epimera III + IV. A wide ridge between epimera I and II. A wide and strong ridge between epimera II and III, curving toward leg II on each side. A narrow, serrate ridge behind epimera IV.

Acetabulum I fairly thick. Pedotectum I relatively narrow in lateral view. Acetabulum II protruding in ventral view; its upper corner rectangular (Fig. 7). Pedotectum II absent. Custodium strongly expanding ventrally (Fig. 6). The orifice of leg III covered by acetabulum III in lateral



Figs. 6-8 *Medioxypopia nagoyae* sp. nov. — 6. Lateral aspect; 7. Posterolateral view of propodosoma; 8. Anterolateral view of metapodosoma.

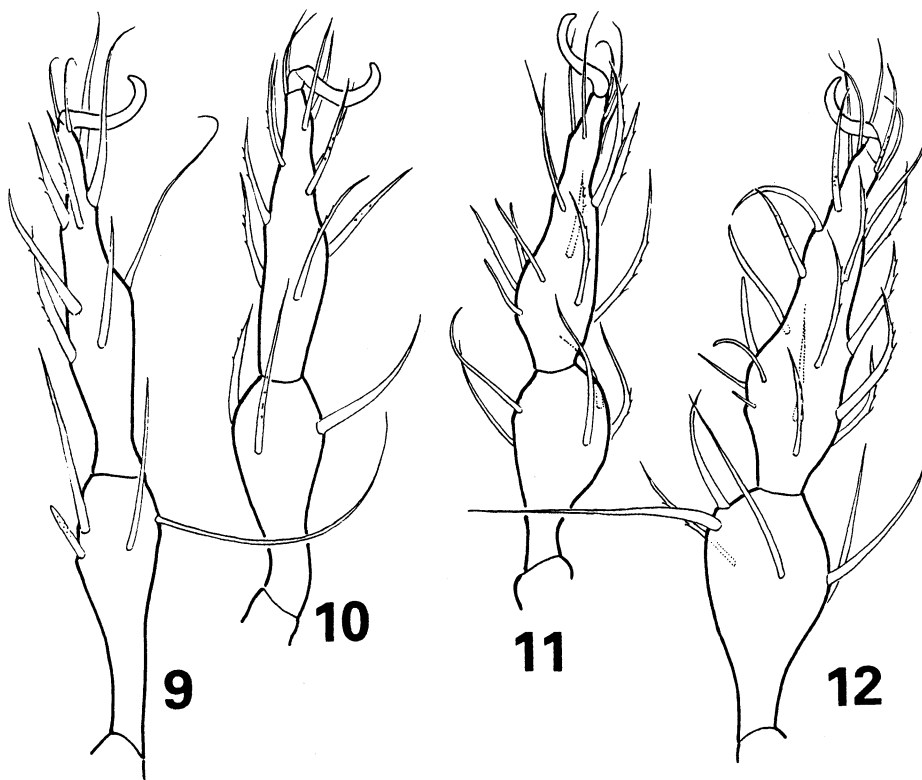
view. Discidium with a round apex bearing seta 4c. The ridge which connects discidium and bothridium as found in many other oppiid mites is absent. Orifice of leg IV opened on the top of a mound.

**Ano-genital Region** Six pairs of genital setae almost the same in length. Genital aperture as long as wide. The interspace between genital and anal apertures about as long as the width of anal aperture. Anal aperture slightly longer than wide. Adanal and aggenital setae are located as in Fig. 14.

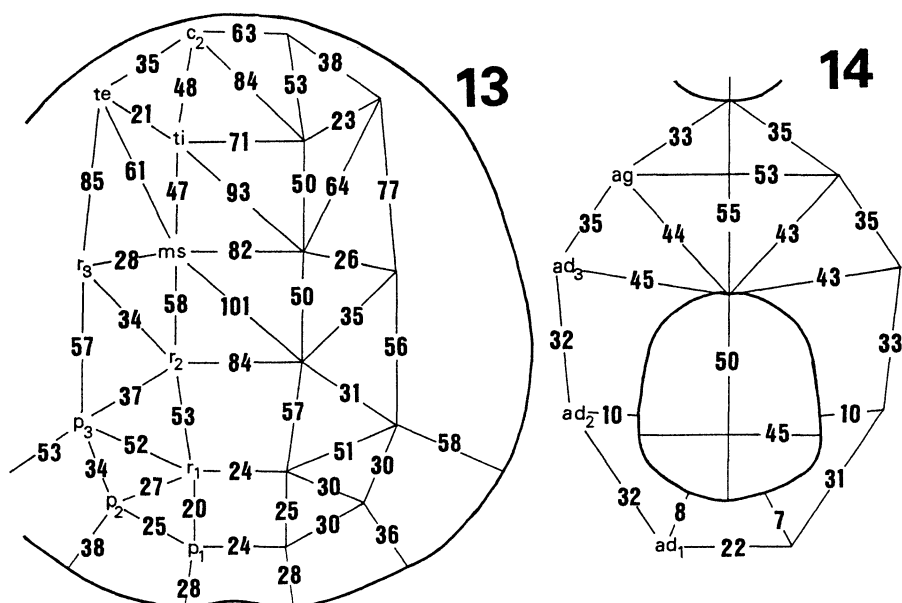
**Notogaster** A pair of small crests behind bothridia. Dorsesejugal complete. Ten pairs of setae located as in Fig. 13. Setae *te* the longest, slightly longer than the distance between setae *te* and *c*<sub>2</sub>. Setae *ti* and *ms* slightly shorter than seta *te*. Seta *c*<sub>2</sub> about 2/3 as long as seta *te*. Setae *r*<sub>1</sub>, *r*<sub>2</sub> and *r*<sub>3</sub> slightly shorter than seta *c*<sub>2</sub>. Setae *p*<sub>1</sub>, *p*<sub>2</sub> and *p*<sub>3</sub> the shortest, a little longer than half-length of seta *te*.

**Legs** Trochanteral setation 1-1-2-1. Femoral setation 5-5-3-2. Genual setation 2(1)-2(1)-1(1)-1. Tibial setation 4(2)-4(1)-2(1)-3(1). Tarsal setation 20(2)-15(1)-12-10.

**Type series** Holotype (NSMT-Ac 10317 on slide) and 16 paratopotypes (on slide and in



Figs. 9-12 *Medioxyoppia nagoyae* sp. nov. Antiaxial side of tarsus and tibia. — 9. Leg IV; 10. Leg III; 11. Leg II; 12. Leg I.



Figs. 13–14 *Medioxyoppia nagoyae* sp. nov. Location of setae based on one dried specimen which was rolled over on a glass for measurement; measurements in  $\mu\text{m}$ . —13. Notogaster; 14. Ano-genital region.

spirit); Higashiyama Park, Nagoya, Aichi, March 28, 1990, collected by N. OHKUBO. All specimens will be deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

**Remarks** The present new species *M. nagoyae* shows the largest body size among its hitherto known congeners and characterized by relatively long notogastral setae. *M. nagoyae* most resembles *M. yuwana* (AOKI, 1983) but is distinguishable from this by longer lamellar and interlamellar setae, thicker exobothridial setae, six pairs of genital setae instead of five, and wider mutual distance of notogastral setae *ms*-*ms*. *M. nagoyae* is distinguishable from *M. acuta* (AOKI, 1984) by the absence of arched costulae on prodorsum and longer lamellar setae. Compared to *M. actirostrata* (AOKI, 1983), *M. nagoyae* is characterized by pointed sensilli instead of club-shaped ones, round rostrum instead of protruding one, concave pedotectum 1 instead of convex one in dorsal view, no special ridges at epimera III + IV, and six pairs of genital setae instead of five.

#### Acknowledgments

The author wishes to express his sincere thanks to Prof. J. AOKI of Yokohama National University for his useful advice.

摘 要

愛知県名古屋市から得られたコブツブダニ属 (新称) *Medioxyoppia* の1新種ナゴヤコブツブダニ (新称) *M. nagoyae* を記載した。 *M. mastigophora* (GOLOSOVA) を本属から除外したので、本属の種はすべて日本だけに分布することになった。本種は、コブツブダニ (改称) *M. yuwana* (AOKI), クチバシツブダニ *M. actirostrata* (AOKI), ノゲツブダニ *M. acta* (AOKI) に次ぐ本属の4番目の種である。

References

- AOKI, J., 1983. Some new species of oppiid mites from South Japan (Oribatida: Oppiidae). *Internat. J. Acarol.*, 9: 165–172.
- 1984. New and unrecorded oribatid mites from Kanagawa, Central Japan (I). *Bull. Inst. Environ. Sci. Technol., Yokohama Natn. Univ.*, 11: 107–118.
- GOLOSOVA, L.D., 1970. New species of oribatids (Acariformes, Oribatei) from the South Primorye and the Kuril Islands. *Zool. Zh.*, 49: 694–701. (in Russian with English summary)
- SUBIAS, L.S. & P. BALOGH, 1989. Identification keys to the genera of Oppiidae GRANDJEAN, 1951 (Acari: Oribatei). *Acta Zool. Hung.*, 35: 355–412.